Pre-Filed Testimony

Of

Carol C. Lariviere
Water Division Superintendent
City of Woonsocket

Docket _____

December 2006

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Woonsocket Water Division
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Introduction and Background

Q. Please state your full name and title?

A. Carol C. Lariviere, Woonsocket Water Superintendent.

Q. **By whom are you employed and in what capacity?**

A. I am the Water Division Superintendent for the City of Woonsocket (WWD), Department of Public Works. I work under the administrative supervision of the Director of Public Works. I am responsible for the operations of the municipal water system.

Q. Please describe your education, background and professional associations?

A. I have worked in Public Water Supply for the past 19 years. I have earned a Bachelor of Science Degree from Worcester State College, graduating Magna Cum Laude. In 2005 I was promoted from Assistant Superintendent to Superintendent of the Water Division in Woonsocket upon the retirement of Emerson J. Marvel.

Q. Do you belong to any professional organizations or committees?

A. I am a member of the American Water Works Association (AWWA), New England Water Works Association (NEWWA), and Rhode Island Water Works Association (RIWWA.)

Q. Do you hold any professional certifications or licenses?

A. Yes, I have a Class 4-Full Drinking Water Distribution Operator license and a Class 4-Full Drinking Water Treatment Operator license, both issued by the State of Rhode Island.

Q. Have you previously testified before state regulatory commissions or courts on rate related matters?

A. No.

Q. Please explain your current duties and responsibilities?

A. I am responsible for operations of the WWD. This includes source of supply, treatment, transmission and distribution systems, pumping, metering, billing, customer service, and capital improvements.

Q. What is the purpose of your testimony?

A. In addition to representing the WWD, my role in this proceeding is to provide the Commission with an overview of the activities of the WWD, to provide the Commission with the framework that supports our request to increase WWD's revenue requirements, to provide the short and long term goals of the WWD and also to respond to any questions from the Commission or the Division about the WWD.

Q. Can you further elaborate on why you are seeking to increase rates at this time?

A. As explained in greater detail in this rate filing, our costs are being impacted by a number of factors that require an increase in rates so we can generate sufficient revenues necessary for the continued operation of the WWD, to fund existing and anticipated new debt, and to allow us the ability to deliver water to our customers in accordance with all applicable regulatory requirements. Without a rate increase, the WWD will confront a situation where our costs (chemicals, staffing, electric power, etc.) have all increased but the utility will generate insufficient revenues from rates previously approved by the Commission, especially with our declines in water volume that we have seen and have projected for FY 2007 and beyond. In addition, WWD will need a new water treatment plant in order to bring WWD into compliance with certain regulatory requirements by 2010. This will require that certain initial activities must be undertaken now, in FY 2007,

in order to begin the process to site, design, construct and startup a new water treatment plant if the new plant is to meet the 2010 deadline necessary for compliance with regulatory requirements

Q. Please summarize the total proposed rate increase that you are seeking?

A. The WWD has demonstrated during FY 2006 prudent fiscal and operational management as evidenced by compliance with regulatory requirements for operations and water quality, exemplary level of unaccounted for water, staffing levels, and collection of accounts receivable. However, in order to successfully manage the utility going forward our supporting testimony and exhibits show that a 24.92% rate increase over current rates is required. This rate increase will provide the financial resources necessary for the WWD to continue its operations with sufficient rate revenues to cover the WWD's expenditures. Without this rate increase, the utility will face serious cash outflows for expenditures that will exceed the cash inflows generated under current rates.

Compliance with Commission Orders

Q. In the last rate case, in Docket 3626 - Order No. 18307 - the Commission required "that Woonsocket Water Department shall not use ratepayer funds to pay late fees or interest charges on past due accounts if there are funds available to pay such accounts by the due date." Have you complied with this Order?

A. Yes we have.

Q. Are you seeking any modification to the Commission's Order with respect to payment of late fees or interest charges?

A. No we are not.

Q. In the last rate case in Docket 3626 - Order No. 18307 - the Commission required that "Woonsocket Water Department shall not use ratepayer funds for the purposes of paying any amounts due for past electric service from Constellation New Energy." Have you complied with this Order?

A. Yes we have.

Q. Are you seeking any modification to the Commission's Order with respect to payments of amounts for past electric service from Constellation New Energy?

A. No we are not, as for past electric costs. However, as explained in Mr. Edge's testimony, we are seeking a rate increase in order to provide funding to address current increases in our electric costs, including the FERC requirement for new locational charges being initiated this year.

Q. In the last rate case in Docket 3626 - Order No. 18307 - the Commission required that "Woonsocket Water Department shall not use ratepayer funds for the purposes of regionalization or privatization studies undertaken by the City of Woonsocket after January 1, 2005." Have you complied with this Order?

A. Yes we have. No regionalization studies were undertaken or paid for by the WWD. No studies addressing change of ownership of utility assets and /or sale of assets to 3rd parties (i.e. "privatization") were undertaken or paid for by the WWD.

Q. Are you seeking any reconsideration by the Commission with respect to the use of ratepayer funds for the purposes of regionalization studies undertaken by the City of Woonsocket?

A. No, however I will explain further below, we are seeking permission to use ratepayer funds to fund studies relating to our recent Inter-Municipal Agreement with North Smithfield. As I will discuss below, these funds are for necessary activities to support a proactive program for the utility to increase water sales by exploring potential new customers beyond Woonsocket and the few areas where we currently sell water on a retail basis in other towns. The potential benefit to our current ratepayers is to create a larger usage base to spread our fixed costs to more ratepayers, thereby effectively lowering the cost burden to existing ratepayers.

Q. In the last rate case, in Docket 3626 - Order No. 18307 - the Commission required "that Woonsocket Water Department shall not use ratepayer funds to perform curb to curb paving unless such paving would have been required by the City of Woonsocket prior to February 2004." Have you complied with this Order?

A. Yes we have.

Q. Are you seeking any modification to the Commission's Order with respect to the use of ratepayer funds for the purposes of performing curb to curb paving?

A. Yes. The Commission denied our request in Docket 3626 mainly for the reason that there was no City wide policy in writing requiring curb to curb paving. Since then the City has enacted a formal written policy, which creates certain required maintenance activities on all City departments, including WWD. The written policy is located at this link: http://www.ci.woonsocket.ri.us/engineering.htm.

Q. In the last rate case, in Docket 3626 - Order No. 18307 - the Commission approved your request to implement a rate increase to support a salary upgrade to employees but also required that any funds collected be placed in a restricted fund to ensure that they are used solely to support the salary upgrade. Did you comply with this Order?

A. Yes.

Q. Please further describe the status of the employees and how you implemented the upgrades?

A. On June 14, 2006 the City enacted ordinances to formerly upgrade salaries.

Q. Have you complied in all other respects with the Commission's Order in the last rate case, Docket 3626?

A. Yes. I believe that we have.

Q. Have you served the appropriate "Notice" of this request for a rate increase on the Department of the Attorney General and other interested parties?

A. Yes, our attorneys have done this with our filing.

Q. Have you supplied the Commission the documentation required to be submitted for all water utility rate filings as set forth in R.I. Gen. Laws 39-3-12.1?

A. Yes. This information is attached to my testimony as Exhibit "1."

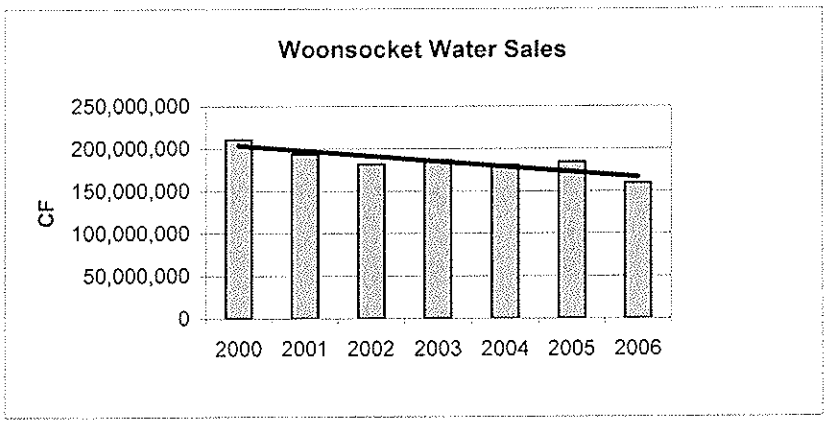
Q. Has the WWD filed all compliance reports with the Commission as required?

A. Yes, I believe we have filed all reports that are required.

Status of Water Sales – Declining Projections for Water Consumption

Q. You briefly noted that water sales are declining. Can you elaborate on this point?

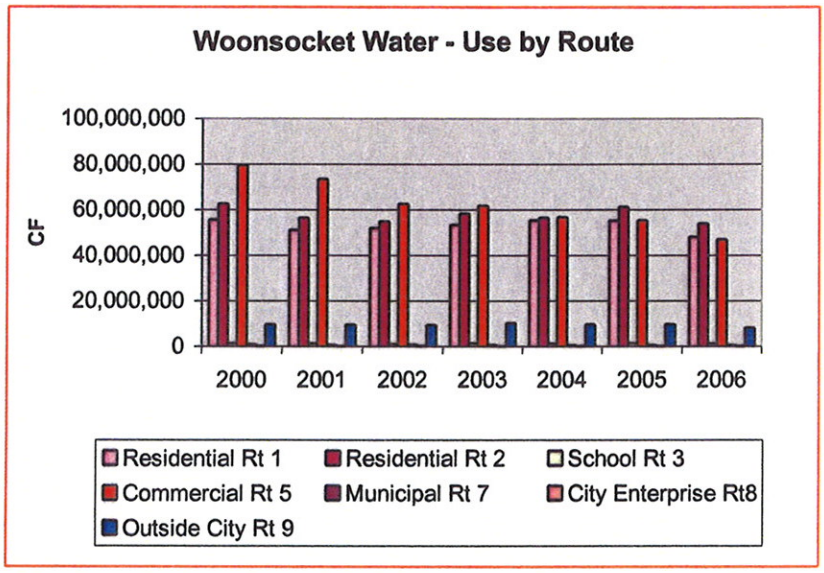
A. Yes. Water sales have been trending downward for several years. This trend is reflected in the following chart, showing water sales of WWD from FY 2000 through FY 2006.



As the chart reveals, water volumes have declined and continue to decline as the customer base of the WWD evolves from significant manufacturing and commercial users in the mix to a customer base consisting primarily of residential and light commercial users.

Q. Can you comment on where you see the greatest loss in water sales during this period?

A. Yes. Our data shows that declining water sales have been concentrated in decreased sales to commercial customers, particularly as local mills have shuttered operations and this trend is shown in the following chart.



According to this chart, commercial sales volumes have declined significantly, from about 80 million cubic feet in FY 2000 to under 50 million cubic feet in FY 2006. We are also seeing decreased consumption amongst both residential and commercial customers as the utility's water conservation programs are implemented.

Q. What is the relevance of declining further water sales to this rate filing?

A. It is my understanding that the Division argues that future rates should be based on the average consumption of the previous three years. However, if sales are trending down (as shown above) then using this three year average approach will almost certainly guarantee that WWD will not bring in sufficient revenues in the rate year to cover our fixed costs.

Q. Is it likely that WWD can sell to more customers in Woonsocket?

A. No, our existing customers do not demand greater water. First, we do not expect to see larger water users, such as commercial customers, moving into the City at this time. Second, our efforts to assist customers with conservation efforts have been quite successful and usage reductions per capita are being demonstrated. As a result, we do not expect that either new Woonsocket customers, or our existing customers, represent any potential for further water sales.

Q. Can you explain what you are doing to increase water sales to other communities?

A. Yes. On January 25, 2006, the City of Woonsocket and the Town of North Smithfield formerly entered into an "Intermunicipal Agreement." Under this agreement, Woonsocket Water has agreed to supply potable water to certain areas in North Smithfield, and to study ways to regionalize our water sales to more communities.

Q. What are the relevant points of this Intermunicipal Agreement?

A. The City of Woonsocket, through the WWD, agreed to supply drinking water through a new pipeline interconnection on a wholesale basis to the Town of North Smithfield. Woonsocket has also committed to initially providing 400,000 gallons per day, increasing up to a million gallons per day, over time, to North Smithfield. Also, Woonsocket has committed to consider further requests by North Smithfield for additional capacity.

Q. Does this Intermunicipal Agreement commit Woonsocket to explore further expansion of its treatment and delivery of drinking water?

A. Yes. Specifically, in Section 14 of the Agreement, Woonsocket and North Smithfield agreed to explore the benefits that may be available in arranging for WWD to provide drinking water for consumers in Woonsocket, North Smithfield and potentially other communities.

Q. Did Woonsocket and North Smithfield describe the extent of any future studies to be undertaken to explore the benefits of expanding WWD's customer base?

A. Yes. Section 14 of the Agreement commits Woonsocket and North Smithfield to forming a "Regionalization Committee" to analyze the many issues that must be examined under any new plan to expand the WWD customer base. One of the more important considerations will be establishing the capacity of a proposed new WWD water treatment plant (as discussed later in my testimony) and determining the potential demand for sales to other communities beyond Woonsocket. In order to determine the potential demand certain studies will need to be conducted.

Q. Does the Agreement specify what subjects the "Regionalization Committee" will analyze as part of this regionalization study?

A. Yes. Section 14 of the Agreement specifies that the study will include an analysis of 1) the cost, 2) the legal, practical and engineering feasibility 3) the time requirements necessary for such an effort 4) the potential costs/benefits of expanding the Plant output to other communities 5) the roles of other water authorities, special districts and 6) rate structures.

Q. Does the Agreement specify the time frame for the completion of such a study?

A. Yes. Section 14 of the Agreement requires that the study be completed within eighteen (18) months of the effective date of the agreement, meaning that the study must be completed by July 16, 2007, with results and recommendations put to the City and Town Councils no later than one hundred twenty (120) days from the date the Study is completed.

Q. Does the Agreement specify the allocation of costs necessary to conduct such a study?

A. Yes. Section 14 of the Agreement establishes that the cost of this study shall not exceed Two Hundred Thousand ($200,000) Dollars to be split between the two communities.

Q. Does the Agreement specify the portion that Woonsocket will fund?

A. Yes, the Agreement specifies that Woonsocket is committed to funding 75% of the cost of the Study (i.e. not more than $150,000), plus its fair share of fees for professional services retained in connection with the preparation and analysis of this study.

Q. Are you seeking permission from the PUC to use ratepayer funds for Woonsocket's commitments in this study?

A. Yes. There are definite benefits to be gained by WWD's ratepayers if we can increase the sale of water to new customers, such as allowing us to spread our fixed costs to more customers so as to moderate the extent of future rate increases. With these potential ratepayer benefits WWD believes that ratepayers should incur the expense required for this study.

Q. Is there other new information that you wish to bring to the Commission's attention?

A. Yes. I understand that in the Commission's ruling in Docket 3626, the Commission relied on the Division's recommendation that such costs should not be allowed because there was no clear plan or contract in place to explain exactly the scope of what such a study would provide. That is not the case today, with the details that I have identified in the Inter-Municipal agreement above. And, although Woonsocket has for many years supplied a small amount of water to other communities in the region, that historic volume of water sold outside of Woonsocket is not anywhere close to the scope of what is contemplated in this agreement. I believe the Commission should assess our rate request in light of these recent developments.

Funds Required for New Treatment Plant

Q. Can you summarize the major drivers that require WWD to pursue the construction of a new water treatment facility?

A. WWD will need to develop and construct a new water treatment plant, and the primary reasons for this are as follows: 1) Physical condition & integrity of the existing treatment plant combined with the capital costs for keeping the plant "on-line"; 2) Need for new facilities for RIDEM and RIDOH compliance and inadequate physical space at the existing site to accommodate the construction required to comply with the new RIDEM rules.

Q. Can you update the Commission on the physical status of the water treatment facility?

A. Yes. The current facility is 44 years old, constructed in 1962 and upgraded in 1989 and is reaching the end of its effective and useful life for the reliable production of high quality drinking water. Recent facility evaluations (following up on previous reports in 1999 and 2004) conducted by our engineering consultants CDM have documented the structural and regulatory compliance concerns regarding the existing water treatment facility. CDM has provided me their most recent draft infrastructure report, and is close to releasing a final version (updating its previous reports). This draft report highlights the complications of continuing operation of the aging treatment facility, compounded by the newer and stricter health regulations that are being imposed by RIDEM and RIDOH.

Q. Can you elaborate on the specific types of problems you are confronting with your existing water treatment facility?

A. Yes. The existing plant, while capable of meeting all current regulatory requirements, requires significant operator attention and expertise – partly stemming from the lack of

adequate backup facilities and redundancies. In addition, the inability to take major pieces of equipment out of service (no backup) makes identified rehab projects and proper long term asset management activities very difficult and in some cases not possible. As a result, the facility is becoming increasingly exposed to the failure of a major treatment component and the resulting inability to meet water quality and water volume requirements. For example, RIDEM has certain regulatory requirements, related to the discharge of filter backwash, that cannot be met without substantial funding of infrastructure at the existing facility. Also, there are physical constraints at our existing site that will likely not accommodate either the construction of a new plant or the construction of the facilities necessary to comply with the RIDEM requirements. All of these concerns have forced WWD to confront the difficult decision to begin the process to design, build and manage a new treatment facility to address these problems.

Q. Have you attempted to address these concerns with RIDEM?

A. Yes we have. The WWD and the City's Public Work's Director are working with RIDEM to address these new regulatory requirements. Representatives from Woonsocket have been in discussions with RIDEM about this problem. For example, in the first week of May 2006, RIDEM expressed a willingness to work with the City to accommodate interim modifications to avoid a more formal enforcement action for noncompliance with these new requirements. In other words, RIDEM is willing to craft an agreement with the WWD to allow WWD to continue to operate its existing treatment plant with specified modifications, until such time as permanent treatment processes and facilities for the treatment of the filter backwash can be completed. However, the restricted site conditions at the existing plant, as reviewed by CDM, make construction of

the new facilities necessary for RIDEM compliance not practical or viable at the location of the existing treatment plant.

Q. Beyond bringing your facility into compliance with DEM regulations, would a new water treatment facility allow you to sell more water to other customers in other communities, consistent with your studies identified above?

A. Yes. We have the capability of producing a safe yield of approximately 8.5 MGD. However, we produce and sell much less than that, actually about 4.5 MGD of potable water each day. My problem is that increasing reliable production of significant volumes of potable water beyond the 4.5 – 5.0 MGD range cannot easily or safely be provided by our existing treatment facility. At the same time we can provide rate relief to our existing customers if we could sell more water to more customers in other communities, and a new treatment plant could accommodate these increased water sales.

Q. Have you evaluated the option of maintaining and financing the existing treatment plant as compared to the cost of obtaining a new treatment facility?

A. Yes. WWD reviewed an analysis prepared by Eisenhardt Group, Inc. (EGI) with water utility staff input, dated July 14, 2006, which I have attached as Exhibit "2" to my testimony. According to the EGI analysis, as presented to our City Council, the ratepayer costs for maintaining the existing plant, compared to the costs for construction of a new facility, is approximately equal, with the added benefits that a new plant would at the same time provide increased reliability, allow WWD to deliver additional volumes of water, and allow WWD to meet the stricter water quality standards that are set to go in effect in 2010.

Q. Has the City decided which direction it prefers to go?

A. Yes. Working with the Mayor and the City Council, through several workshops held earlier this year, the City has committed to proceed to address the compliance issues discussed above, by constructing a new water treatment facility. After evaluating these concerns the City Council, in a recent workshop on August 2, 2006, directed WWD to proceed to address these problems by beginning the process towards completion of a new water treatment facility.

Q. Can you elaborate on how the City has evaluated the options presented to it?

A. The EGI analysis (Exhibit "2" to my testimony) outlined the various options that we explored, described as:

> **a) Traditional Approach** (separate contracts and organizations for the Design, Construction, and Operation) with operations conducted either by City (WWD) employees or contract operations (outsourcing) by the private sector;
>
> **b) Design, Build Approach (D/B)** with one firm / one contract responsible for the design, permitting, construction, and startup-performance testing of the new plant. Operations would be performed by either the WWD staff or a private sector contractor; or
>
> **c) Design, Build, Operate Approach (DBO)** with one firm responsible for the design, permitting, construction, and operation of the new facility.

Q. Can you elaborate on what you mean by a traditional approach?

A. As explained in more detail by EGI's report, attached as Exhibit "2," municipalities and public entities have historically utilized a three step process for the design, procurement (bidding), and construction of new facilities. Each step would involve the participation of independent companies and organizations with separate contracts and responsibilities. Significant technical, operational, construction, inspection, regulatory, financial, and legal / contracts expertise and consulting assistance is required for this approach. There

is no single entity responsible for the design & construction or for the design, construction, and operational performance of the facility. The approach requires the completion of a comprehensive and very detailed final design that specifies exactly what is to be built. Each component and piece of equipment is then competitively procured using these very detailed specifications. After these steps, the facility is constructed.

Q. Are you aware of any drawbacks to what you call a traditional approach?

A. As I understand from my consultation with EGI and others, this traditional approach, while successful at delivering facilities, can also have certain drawbacks, such as a longer timetable (due to three separate procurement phases), lack of single entity accountability and responsibility (opportunities to point fingers at other entities when problems occur), and greater cost (given three separate entities). Because of these potential drawbacks, the City and WWD have decided to explore other options.

Q. Can you elaborate on the alternatives that have been explored and what direction WWD is going?

A. Yes. We are exploring alternative delivery formats using either Design / Build (DB) or Design, Build, Operate (DBO) formats for the outsourcing of responsibilities and services to be provided to the WWD by a single contract entity. We have concluded that a DB or DBO procurement structure can provide significant benefits and advantages for the City and the utility and intend to seriously pursue one of these options.

Q. Can you describe the advantages of a DB or DBO option?

A. As more fully explained in the EGI report (Exhibit "2"), DB or DBO methods were developed to provide potential advantages and to overcome some of the issues identified with the usage of the traditional design, bid, build and operate approach previously

discussed. These advantages are further outlined in a chart prepared by EGI, and attached to my testimony as Exhibit "3." The Commission should be aware of these advantages, such as Woonsocket's wastewater plant upgrade, Newport's wastewater plant upgrade, and the new Pawtucket water plant. I refer the Commission for these and other recent examples in the chart prepared by EGI, attached as Exhibit "4." Also, I understand that there are certain financial benefits that will be available as a public utility, such as tax exempt financing, including revenue bonds and the Rhode Island Clean Water Finance program, which can be utilized for the financing of the new facilities under either of these alternative approaches.

Q. Do you have any final comments that you would like to make at this time?

A. Yes. I recognize that the rate increase being requested is significant. I also recognize, and hopefully have adequately discussed, that the rate increase is needed to generate sufficient revenues for the proper operation, planning, and new facility requirements that lie ahead. Without the rate increase requested, the WWD faces a near term future of inadequate revenues to provide the resources and programs necessary to produce high quality / regulatory compliant potable water, initiate activities for necessary new facilities, insure future regulatory compliance or long term cost effectiveness.

Q. Does this conclude your testimony?

A. Yes.

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Exhibit 1

Table A

Compliance with R.I. Gen. Laws 39-3-12.1(a)(1)

STATUS OF PHYSICAL PLANT

A. Source of Supply:

1. Crookfall Brook Watershed: This source consists of Reservoirs 1 and 3 in the towns of Lincoln, North Smithfield and Smithfield. The safe yield of this system based on a 95% reliability is 3.5 MGD.

2. Harris Pond Watershed: This source of supply is an impoundment of the Mill River in Blackstone and Bellingham, Massachusetts. The safe yield of this source based on a 95% reliability of 4.4 MGD.

B. Treatment:

The Charles G. Hammann Memorial Treatment Plant has a maximum capacity of 13.25 MGD. The facility uses conventional treatment consisting of coagulation, flocculation, sedimentation, granular activated carbon filtration, disinfection, fluoridation and corrosion control. Other system components of the facility are:

2	0.5 MG Steel Clearwells
1	0.4 MG Steel Washwater Storage Tank
3	3500 gpm Main Distribution Pumps
1	5000 gpm Diesel Pump
1	125 KVA Emergency Power Generator

C. Distribution and Storage:

The distribution system consists of approximately 125 miles of pipe, 2843 valves, 1500 hydrants, nine storage tanks and four pump stations.

Exhibit 1

Table B
Compliance with R.I. Gen. Laws 39-3-12.1(a)(2)

WATER PIPE ADDED SINCE 1996

SIZE (IN.)	June/1996 (FEET)	June/2006 (FEET)	CHANGE (FEET)	
1	1,086	1,086	0	
1.25	239	239	0	
1.5	768	968	200	
2	3,926	3,926	0	
2.5	533	533	0	
3	93	93	0	
4	11,958	11,320	-638	*
6	135,287	132,667	-2,620	**
8	316,707	326,079	9,372	*/*~
10	11,918	11,918	0	
12	116,621	119,541	2,920	*/ **
14	10,437	647	-9,790	*
16	2,418	12,003	9,585	*
18	18,526	18,526	0	
20	17,581	17,581	0	
24	0	14,460	14,460	***
30	10,909	17,299	6,390	*
TOTALS	659,007	688,886	29,879	
MILES	124.812	130.471	5.659	

*	2005/2006 Water Main Rehabilitation Project
**	Greenville Rd, Rockcliffe Farms at Wendy's Extension
***	Crook Falls Brook
*~	Gauthier Ave / Wanda Ext.

Exhibit 1

Table C

Compliance with R.I. Gen. Laws 39-3-12.1(a)(3)

WATER TREATMENT CHEMICALS

CHEMICAL USE AND COST
SIX MONTH TOTAL (January 2006 through June 2006)

Chemical	Total lb	Unit Cost	Total Cost
Alum	163,450	$276.31/ton	$22,581.48
Lime	80,367	$221.20/ton	$8,888.59
Fluoride	9,158.5	$840.40/ton	$3,848.40
Corrosion Inhibitor	29,544.5	$840.00/ton	$12,408.69
Chlorine	6,226	$3,000.00/ton	$9,339.00
Polymer	2,380.84	$2,640.00/ton	$3,142.71
Sodium Hypochlorite	0	$1.40/gallon	0
Total			$60,208.87

Aluminum Sulfate (Alum):

Aluminum sulfate is added to the raw water to cause coagulation and flocculation to occur which removes some of the color and turbidity naturally found in surface water supplies.

Hydrated Lime:

Hydrated lime is added to raw water as needed for pH adjustment for optimum coagulation and flocculation. It is also added to the finished water to increase pH and total alkalinity for corrosion control.

Sodium Silicofluoride:

Fluoride is added to the finished water to reduce the incidence of dental cavities.

Corrosion Inhibitor:

The chemical added to the finished water to aid in corrosion control is a blend of poly and orthophosphates. This chemical acts as a sequestering agent and also can form an insoluble protective film on the surface of the pipe.

Chlorine:

Exhibit 1

Table C – Page 2

Chlorine is added to the finished water for disinfection purposes. It is also added to the raw water during the warmer months for pretreatment disinfection.

Polymer:

Polymer is added to raw water to enhance the sedimentation process.

Sodium Hypochlorite:

Sodium hypochlorite is added to the water pumped from Harris Pond for disinfection purposes.

GENERAL COMMENTS:

The amounts of chemicals added are seasonally dependent as well as weather dependent. As flows increase during the warmer months, more chemical must be added to maintain the optimum dosage for that chemical. The dosages for some chemicals (i.e., fluoride and corrosion inhibitor) are fixed. Other chemicals (i.e., alum, polymer, lime and chlorine) are dosed in varying amounts depending on raw water quality and flow.

Woonsocket uses a surface water supply. The terminal reservoir is fed by Crookfall Brook, which is greatly influenced by rainfall events. During periods of heavy precipitation the raw water quality deteriorates dramatically, necessitating the addition of more alum, polymer, lime and chlorine to provide water that meets all federal and state regulations. The information presented in the table above regarding chemical use and loss is from the time period January 2006 to June 2006. This was a wet period with over 30 inches of precipitation. The historical average for precipitation in this time period is approximately 24 inches. Also, there was a carbon change-out during FY 2006, with costs allocated to this amounting to $176,000.

Exhibit 1

Table D

Compliance with R.I. Gen. Laws 39-3-12.1(a)(4)

POLICY RELATING TO EXPANSION AND RENOVATION

Woonsocket has an Infrastructure Replacement Program that addresses the renovation or replacement of major systems components.

It is and has been the policy of the City of Woonsocket, Water Division ("WWD") to continue to provide quality service to all existing customers. Systems expansion within existing service areas, where there is sufficient existing utility in place to support the expansion, is encouraged and an existing WWD policy. Our policy is to provide long term, cost effective capital and operating programs that assure reliable and consistent compliance with regulatory requirements and the protection of the public health. WWD's policy is also to proceed along pathways that minimize risk and at the same time provide long term, cost effective services. Technical evaluations are made to determine future needs so that required expansion can proceed in a timely manner. If there is insufficient utility infrastructure available, the City requires the individuals seeking the service to install contributed capital.

Studies conducted by CDM have evaluated the technical requirements and facility options that assure on-going regulatory compliance for WWD's facilities. In short, the CDM studies identified the need for replacement of the existing water treatment facility with a new facility that provides capabilities and assurances of consistently meeting new safe drinking water regulatory requirements (THM's, Stage 2 DFB, giardia and cryptosporidium removal levels). The CDM cost estimate for these replacement facilities is currently estimated at approximately $ 30 million (FY 2006). Also, RIDEM has announced new discharge requirements for the filter backwash system at the existing water treatment plant. As explained further in testimony, the treatment components required to meet the new RIDEM regulatory requirement cannot be sited at the existing treatment plant location because of the lack of adequate space and site limitations as evaluated and determined by CDM. These new RIDEM requirements add additional impetus to WWD's position that a new water treatment plant is required.

Consistent with WWD's policies, summarize above, WWD has taken CDM's recommendations and conducted a financial analysis and projection as part of its strategic planning. These analyses, conducted by WWD staff and the Eisenhardt Group (EGI), identify the need to stabilize and then increase the volume of water sales so as to have an expanding, rather than declining, water volume over which the recovery of the Utility's fixed costs can be obtained. The analysis has also compared the financial costs (revenues needed) and risks associated with long term continuation of the existing facilities and the alternative of constructing a new water treatment facility. The analysis and conclusions from these studies support the following Utility policies and positions:

Exhibit 1

Table D – Page 2

1) Pro-active development of new and additional customers for the water utility is desirable and needed. With a larger user base, and hence a greater volume of water delivered, the fixed cost recovery per 1000 gallons will be reduced and result in lower user rates for the utility's customers. Studies of available opportunities and formulation of pro-active programs to implement such activities are necessary.

2) Planning, procurement, construction and on-line operation of a new water treatment plant by 2010 is a technical necessity and consistent with the provision of low cost, reliable water services for the utility's customers.

In sum, amounts expended during the prior year and the proposed improvements are included in the annual reports on file with the Commission and as part of the WWD's capital improvements program.

a. Amount spent in fiscal year ending June 30, 2006: $ 1,369,743 (IFR funds) and $4,364,959 (funds expended from monies borrowed in Bonds)

b. Amount expected to be spent in fiscal year 2007: $ 750,000.

- Regionalization Study ($ 150,000): studies for the identification and assessment of approaches for expanding the Utility's service area and thereby delivering additional water volumes to an expanded customer base

- New Plant ($ 600,000): activities to include site location studies and preparation, procurement development and initiation, technical assessments

Exhibit 1

Table E

Woonsocket Water Division

Water Statistics – Non Accounted For Water (Hundred Cubic Feet)

	Report Period 2002	Report Period 2003	Report Period 2004	Report Period 2005	Report Period 2006
Total Water Distributed	2,115,882	2,030,743	1,919,516	1,843,737	1,830,749
Total Metered Sales	1,860,311	1,859,967	1,803,674	1,839,550	1,588,029
Unmetered Sales	2,286	2,588	3,722	1,392	922
Water Used by Company	89,388	85,082	87,452	n/a	84,987
Total Disposition of Water	1,951,935	1,947,637	1,894,848	1,840,942	1,673,938
Unaccounted for Water	163,947	83,106	24,668	2,795	156,811
Percentage	7.75%	4.09%	1.29%	0.15%	8.57%

Exhibit "2"

Whitepaper for the City of Woonsocket
Alternatives for Upgrading Water Treatment Facilities
7/14/06

Whitepaper Purpose

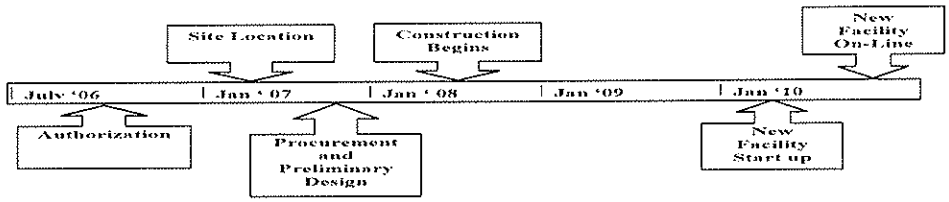
This paper provides a summary discussion of the City's water treatment facility needs and the financial, regulatory, and risk implications of alternative pathways going forward. Specifically, the whitepaper summarizes the alternatives of retaining the existing water treatment facility and construction of new facilities as the strategic options available. The paper concludes with a recommended course of action based on the items identified and discussed in the whitepaper.

New Plant Needs and Drivers

The City's existing water treatment facility requires significant capital expenditures and upgrades to maintain near term operational integrity and to reliable meet existing regulatory requirements. Specifically, as outlined in the "WTP Evaluation Report" prepared by CDM, the water treatment facility has significant deficiencies that include technical and structural issues at the existing plant. As further identified by CDM, rehabilitation of the existing plant is not a practical or cost effective approach for remedying the concerns and exposures. Left unaddressed, the existing facility has significant issues that will potentially lead to the failure or inability of the facility to properly operate, regulatory violations, and in the extreme, outright failure of the facility.

Recently, March 2006, RIDEM issued new, updated state-wide requirements for the treatment of the water plant's filter backwash. This backwash has historically been discharged to the Blackstone River. The RIDEM requirements cannot be accommodated by the existing facility. Discussions with CDM indicate that the existing plant site does not provide sufficient space for the addition of the necessary facilities to comply with these new regulatory requirements. Meetings held with RIDEM in the first week of May 2006 and subsequent discussions and correspondence have indicated that RIDEM will work with the City to accommodate interim modifications. RIDEM's willingness to do so is based on RIDEM's expectation that this summer the City will authorize a new water treatment facility to be designed, constructed, and started up within the time period of the current RIDEM permit. The City's current RIDEM permit runs to 2011.

Outlined below is a "typical" new facility design, construction, and startup schedule. As illustrated, authorization of the new facility during 2006 is necessary, no matter what procurement alternative is selected, to insure design, construction, and startup by 2010. Utilization of the traditional approach will likely extend the timeline and not provide the City with guaranteed construction costs, a guaranteed timeline, or guaranteed regulatory compliance and performance for the new plant.



Production Capacity

The City's raw water reservoir system has a sustained, safe yield of approximately 8.5 MGD. Currently, the water facility produces and sells less than 4.5 MGD of potable water each day. Increased water sales to additional customers and potential customers in the areas adjacent to Woonsocket provide the utility with the opportunity for increased revenues and the spreading of costs over a larger volume of water and customers. However, the increased, reliable production of significant volumes of potable water beyond the 4.5 – 5.0 MGD range cannot be readily provided by the existing treatment facility – even with very significant capital expenditures and rehabs.

Budgetary Impacts

Because water treatment facilities are inherently high, fixed cost operations, the production of an additional 1.0 MGD of potable water each day generates revenues at the existing water rates that far exceed the incremental costs of producing the additional 1.0 MGD. Hence, additional water sales will allow user rates to be lower than the user rates necessary for the current production volume of 4.5 MGD. Said another way, while future water rates will rise, the sale of additional water will reduce the size of the rate increase that would otherwise be necessary for the current users of the system.

The current water utility budget also annually incurs significant "Infrastructure Replacement Fund" expenditures for plant improvements and rehabs that are being undertaken in efforts to keep the existing facility operating and producing regulatory compliant potable water. The plant expenditures are now forecast to approach $ 1 million / year for the foreseeable future and do not address the potential impact of a major unit process failure such as highlighted in the CDM report.

Based upon the CDM report, the updated costs for a new facility in 2006 $'s is estimated to be approximately $30 million not accounting for site acquisition and site preparation costs. Such a new facility will provide the long term capability to reliable provide potable water up to the 8.5 MGD sustained yield of the City's raw water supply. Attachment A illustrates that the rate increase necessary for the construction of a new water treatment plant is only slightly above the rate increases necessary for the continued operation of the existing facility. As previously discussed, this later option does not solve the new RIDEM requirements, limits effective water production to only 4.5 MGD, and leaves the City and its water users at risk for a significant facility failure and inability to operate or perform. Based upon this financial analysis and the factors listed, the decision to proceed with the authorization of a new facility seems well justified and responsible.

The CDM report tentatively identified a site in North Smithfield for the new water treatment plant. The site has a number of potential advantages such as the ability to transport water via gravity vs. force main system, but

upon further review and assessment by Eisenhardt Group, the proposed site has a number of serious issues and restrictions. Key amongst these items are: 1) site contamination and clean of hazardous waste materials; 2) a location outside of the City of Woonsocket that creates access, permitting and taxation complexities; 3) a location that would, under a regionalized utility approach, have Payment in Lieu of Taxes (PILOT) payments going to North Smithfield rather than Woonsocket. As a result, the new facility pathway should also involve the need to identify suitable parcels that are located within the City of Woonsocket.

The new facility can be designed and constructed in a modular fashion so that the initial increment may be 5.0 MGD and expansion phases to 8.5 MGD anticipated in the initial design and facility layout. The facility, no matter what treatment technology is ultimately selected, will meet all regulatory requirements, including the RIDEM filter backwash regulations and provide a modern, reliable facility that should incorporate computer automation, SCADA systems, and similar recent advances in treatment plant capabilities that upgrade the consistency and reliability of the treatment processes and operation.

Regulatory Compliance and Risk Profiles

As previously summarized in the whitepaper, the existing water treatment facility is at significant risk with regard to reliable regulatory compliance. Even at the reduced production capacity strategy currently implemented by the utility (4.5 to 5 MGD production), the plants filtration and microbial removal capabilities are strained to reliably meet water quality requirements. Usage of gaseous chlorine systems for disinfection creates additional risks and safety concerns. Compounding the situation is the significant exposure that structural issues at the current facility (filter bottoms as one example) are high priority candidates for failure. Should such a failure occur the plant would no longer be capable of supplying regulatory compliant potable water in the quantities necessary to meet even today's reduced demands.

As detailed in the CDM report and discussions with the water utility manager (Carol Lariviere), the existing water treatment plant lacks adequate redundancy of equipment and systems to allow effective corrective actions and rehab of the facility. For example, repair and rehab of the filters involves taking one filter system "off-line" for an extended period of time – but, both filter systems are needed on-line to meet water production requirements and demands.

Further compounding the risk profile provided by continued operation of the current facility is the new regulatory requirement for the treatment of the plant's filter backwash (approximately 300,000 gallons per day). With inadequate space available at the existing site and with adjacent land constraints provided by the railroad line and wetlands adjacent to the plant site, a new location is necessary for the inclusion of the filter backwash facilities and systems.

Whitepaper Conclusions and Recommendation

Taken together, these items present a risk profile that cannot be remedied by extensive rehab and continued long term operation of the existing treatment plant facility. Such a pathway creates high risk exposures for regulatory compliance, reliable water production volumes, and avoidance of emergency situations. Selection of the pathway that proceeds forward with a new facility eliminates these risk profile exposures and insures compliance with new RIDEM requirements for filter backwash. The need for significant rate increases under either scenario (existing plant and new facility), as summarized in Attachment A, reinforce the recommendation of proceeding with a new facility.

Exhibit "3"
Typical Project Cost Savings[1]

Examples of DBO Partnerships for Water & Wastewater

Municipality	Description (system type)	Plant Size (mgd)	Contract Term (years)	Procurement Type	Est.Cost Savings
Arvin, CA	Wastewater	2	35	DBO	$ 12 million (25%) *
Auburn, AL	Wastewater	7	25	DBO	$ 36 million (25 %) *
Cle Ullum, WA	Wastewater	2	20	DBO	$ 7 million (20%) *
Bessemer, AL	Water	24	20	DBO	$ 20 million (22%) *
Cranston, RI	Wastewater	23	25	DBO	$ 35 million (25 %) *
Delran, NJ	Water	30	20	DBO	not available
Evansville, IND	Water	60	10	DBO	$ 8.1 million
Gardner, MASS	Water	3	20	DBO	$ 5 million (20%) *
MCD, OH	Wastewater	5	20	DBOO	$ 18 million (23%) *
Franklin, OH	Water	5	20	DBO	$ 9 million (30%) *
Glens Falls, NY	Water	7	20	DBO	not available
Hingham, MASS	Water	8	20	DBO	not available
Honolulu, HW	Water Reclaim.	13	20	DBO	$ 21 million (22%) *
Key Largo, FL	Wastewater	3	20	DBO	$ 30 million (29%) *
Lynn, MASS	Wastewater CSO	28	20	DBO	$ 35 million (27%) *
Leominster, MASS	Water	4	20	DBO	$ 5 million (18%) *
Moncton, NB, Canada	Water	25	20	DBO	$ 12 Million (15%) *
Newport, RI	Wastewater	11	20	DBO	$ 25 million (30 %) *
North Brunswick, NJ	Water/WW	10/10	20/20	DBOO	$ 45 million *
Pawtucket, RI	Water	25	20	DBO	$ 30 million (32 %) *
Plymouth, MASS	Wastewater	3	20	DBO	$ 8 million (18%) *
Phoenix, AZ	Water	40	20	DBO	$ 30 million (20%) *
Quincy, WA	Wastewater	6	20	DBO	$ 11 million (22 %) *
Richmond, CA	Wastewater	16	20	DBO	$42 Million (50 %) *
Tampa, FL	Desalinization	24	30	DBO	$ 60 million (20 %) *
Tampa Bay Water, FL	Water	66	15	DBO	$ 85 million (21 %) *
Seattle, WA - Tolt	Water	120	25	DBO	$ 70 million (40 %) *
Seattle, WA – Cedar	Water	100	20	DBO	$ 40 million (25%) *
Taunton, MASS	Wastewater	8	20	DBO	$ 45 million *
Washington Borough, NJ	Wastewater	2	15	DBO	$ 2.2 million (12 %) *
Wilmington. DEL	Wastewater	105	20	DBO	$ 60 million (27 %) *
Woonsocket, RI	Wastewater	18	20	DBO	$ 45 million (38 %) *

* Includes full-term capital repair and replacement risk by the private sector partner

DBO = Design, Build Operate; DBOO = Design, Build, Operate, Own

Source: Municipal entities and as reported in Public Works Finance

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[1] Prepared by Eisenhardt Group Inc. ("EGI")

Exhibit 4
Typical Risk Assignment and Guarantees

	Topic	Private Sector DBO	Private Sector DB & City Operates	Traditional Design, Bid, Build, Operate
1)	Capital Costs Guaranteed	Yes	Yes	No
2)	Operating Costs Guaranteed (short & long term)	Yes	No	No
3)	Guaranteed Facility Performance	Yes	Limited	No single entity
4)	Permitting Risk Assumed	Yes	Yes	No
5)	Construction Schedule Delays	No $ cost adjustment	Partial	Difficult to shift risks
6)	Change Order Costs (not City initiated)	Included in guaranteed costs	Partial	City exposure for $'s
7)	Guaranteed Regulatory Performance	Yes	Only at startup	At startup but no single entity responsible
8)	Regulatory Fine Coverage (failure to meet standards)	Yes	No	No
9)	Performance Bond – Construction	Yes	Yes	Yes
10)	Performance Bond – Operations	Yes	No	No
11)	Liability Coverages and Insurances	Provided	Design & Construction only	Design & Construction only (multiple legal entities)
12)	Ability to Early Terminate the Agreement	Yes	Yes	Less clear
13)	Upfront reimbursement of procurement costs	Yes	Not typical	No
14)	Upfront Design & Permitting Costs	Included in 20 yr. contract costs	City pays upfront	City pays upfront
15)	Guarantee for Long Term Maintenance & Facility Condition	Yes	No	No